WHAT IS CLAIMED IS:

1. A GaN-based semiconductor light emitting diode comprising:

a substrate on which a GaN-based semiconductor material is grown;

a lower clad layer formed on the substrate, and made of a first conductive GaN semiconductor material;

an active layer formed on a designated portion of the lower clad layer, and made of an undoped GaN semiconductor material;

an upper clad layer formed on the active layer, and made of a second conductive GaN semiconductor material;

an alloy layer formed on the upper clad layer, and made of an alloy selected from the group consisting of La-based alloy and Ni-based alloy; and

an TCO(Transparent Conduct Oxide) layer formed on the alloy layer.

2. The GaN-based semiconductor light emitting diode as set forth in claim 1,

wherein the alloy layer has a thickness of 100Å or less.

3. The GaN-based semiconductor light emitting diode as set forth in claim 1,

wherein the La-base alloy is $LaNi_5$.

4. The GaN-based semiconductor light emitting diode as set forth in claim 1,

wherein the Ni-based alloy is ZnNi or MgNi.

5. The GaN-based semiconductor light emitting diode as set forth in claim 1,

wherein the TCO(Transparent Conduct Oxide) layer is made of at least one material selected from the group consisting of ITO, ZnO, Indium Oxide and MgO.

6. A method for manufacturing a GaN-based semiconductor light emitting diode comprising the steps of:

(a) preparing a substrate on which a GaN-based semiconductor material is grown;

(b) forming a lower clad layer, made of a first conductive GaN semiconductor material, on the substrate;

(c) forming an active layer, made of an undoped GaN semiconductor material, on the lower clad layer;

(d) forming an upper clad layer, made of a second conductive GaN semiconductor material, on the active layer;

(e) removing designated portions of the upper clad layer and the active layer so as to expose a portion of the lower clad layer;

(f) forming an alloy layer, made of an alloy selected from the group consisting of La-based alloys and Ni-based alloys, on the upper clad layer; and

(g) forming an TCO(Transparent Conduct Oxide) layer on the alloy layer.

7. The method as set forth in claim 6,

wherein the alloy layer has a thickness of 100Å or less.

8. The method as set forth in claim 6,

wherein the La-base alloy is $LaNi_5$, and the Ni-based alloy is ZnNi or MgNi.

9. The method as set forth in claim 6,

wherein the La-base alloy is $LaNi_5$.

10. The method as set forth in claim 6,

wherein the Ni-based alloy is ZnNi or MgNi.

11. The method as set forth in claim 6,

wherein the step (f) is a step of growing the alloy layer on the upper clad layer by a physical vapor evaporation method.

12. The method as set forth in claim 6,

wherein the step (g) is a step of growing the ITO layer on the alloy layer by a physical vapor evaporation method.

13. The method as set forth in claim 6, further comprising the step of:

(h) thermally treating the TCO layer.

14. The method as set forth in claim 13,

wherein the step (h) is a step of thermally treating the TCO

layer at a temperature of approximately 200℃ or more for 30 seconds or more in an air atmosphere.